

# Lessons Learned

## Weeks 6-9: Phase 3

### *Technical Aspects*

#### ➤ **Automated Feeding System**

- Recognized that our vision for an automated feeding system was not feasible.
- Cost of both conveyor and linear guide systems were above limits (~\$3,500)

#### ➤ **Machine Shop**

- Became “re-acquainted” with the machines and tools available in the machine shop

#### ➤ **O-Ring**

- O-Ring concept will not work. The groove needed to be created inside the brass attachment will not compress in the right way to create a seal. Brass in contact with CFM Nozzle is okay.

#### ➤ **Software**

- No one on the team had worked in depth with Solidworks
- The full features of COMSOL were unknown
- Team had no prior knowledge with controller Integrated Development Environments

### *Mitigation*

#### ➤ **Remove automated feeding system**

- Redesigned with a rolling fixture
- Cost effective alternative
- Suggest automated feeding system as future project concept (follow on)

#### ➤ **Subsequently used the machine shop for testing**

- Mischa is now familiar with shop for further testing needs

#### ➤ **Benchmark against the argon tank seal in machine shop. (Same concept utilized)**

#### ➤ **Familiarized team member with Software**

- Mischa utilized resources to familiarize self with Solidworks features
- Alex and Dan became acquainted with IDEs through Controls Test 1

### *Interpersonal Aspects*

➤ **Need to Communicate More Effectively**

- Team members are not always aware what work is being done/what needs to be done

### **Other**

➤ **Documentation is Key**

- Work and meetings with SME's was not always documented

### *Mitigation*

➤ **Make team members aware via email (or other method) of what is being done**

- Ericka checks in a few times per week on progress

### **Mitigation**

➤ **Use Logbooks more often for every meeting**

- Team to review notes